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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/589,388 06/08/00 NAKASHIBA

M 2000-0732

EXAMINER

DM32/0621

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WASHINGTON DC 20006

ART UNIT	PAPER NUMBER
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3723

DATE MAILED:

06/21/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/589,388

Applicant(s)

NAKASHIBA ET AL.

Examiner

George Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 11 October 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11 is/are allowed.
- 6) ☒ Claim(s) 12-72 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 08/807,463.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.

- 18) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

DETAILED ACTION

Receipt is acknowledged of the IDS filed on Paper No. 4 which has been considered and placed of record in the file.

Receipt is acknowledged of Applicant's amendment filed on October 11, 2000.

Claims 1-72 are presented for examination.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 12, 13, 18, 19, 21, 23, 24, 38-46, and 49-72 are rejected under 35 U.S.C. 102(e) as being anticipated by Mack'758.

With reference to Figs. 1-2, col. 2, line 40 to col. 5, line 15, and col. 6, lines 54-67, Mack'758 discloses the claimed invention.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 14-17, 20, 22, 25-37, and 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mack'758 in view of Kobayashi et al.'751.

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Mack'758 has been discussed above, but does not disclose applying an adjustable pressure to a presser ring (retainer ring 114) vertically movably disposed around said top ring for pressing said polishing surface.

With reference to Figs. 3-5, col. 3, line 33 to col. 7, line 5, Kobayashi discloses wafer polishing apparatus having a retainer ring 50 arranged on the outer periphery of the carrier 46, a diaphragm 44 for pressing the carrier 46, a ring-shaped tube 54 which is made of an elastic material, and a second pressure regulating mechanism 60 for independently regulating a pressure of a fluid filled within the tube 54, thereby to prevent the waving deformation of the polishing pad so as to prevent an excessive polishing of the outer peripheral portion of the wafer.

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the polishing apparatus of Mack with a retainer ring as taught by Kobayashi to independently regulating a pressure of a fluid filled within the tube 54, thereby to prevent the waving deformation of the polishing pad so as to prevent an excessive polishing of the outer peripheral portion of the wafer.

Allowable Subject Matter

5. Claims 1-11 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter: the specific limitation of "holding a workpiece between a polishing surface of a turntable and a holding surface of a top ring disposed above said turntable ... ejecting pressurized fluid from openings in a plurality of areas in said holding surface of said top ring toward the workpiece held by said top ring, said pressurized fluid being selectively

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ejectable from said openings in said respective areas " in claim 8, and "a plurality of openings provided in said holding surface of said top ring ... so that said pressurized fluid is selectively ejectable form said openings in said respective areas" in claims 1 and 11 are not inherent nor made obvious by the prior art of record.

Conclusion

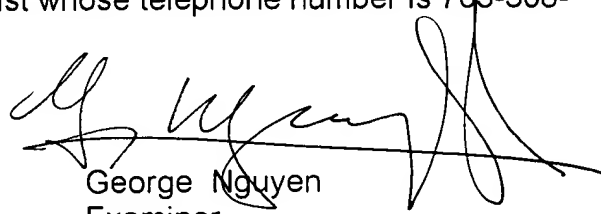
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Guthrie et al.'215 and Shendon et al.'630 all disclose fluid-pressure regulated wafer polishing head.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Nguyen whose telephone number is 703-308-0163. The examiner can normally be reached on Monday-Friday/630AM-300PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 703-308-2687. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3579 for regular communications and 703-305-3579 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1078.

George Nguyen
Patent Examiner


George Nguyen
Examiner
Art Unit 3723

GN
June 11, 2001